Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)
	)
MCMURDO, LTD.	)
	)
Request for Waiver to Allow Certification and Use of Smartfind S10 and Safelink R10 Personal Automatic Identification System Beacons	)

ORDER

Adopted: January 23, 2012 **Released: January 24, 2012**

By the Deputy Chief, Mobility Division, Wireless Telecommunications Bureau:

1. *Introduction*. This item grants a waiver request to permit the certification and use of a new type of marine search and rescue equipment for use in man-overboard recovery situations. On July 11, 2011, McMurdo, Ltd. (McMurdo) filed a request for waiver of Section 80.1101(c)(6) of the Commission's Rules[1] to permit equipment certification and use of its McMurdo Smartfind S10 and Kannad Marine Safelink R10 Personal Automatic Identification System (AIS) Beacons.[2] For the reasons set forth below, we grant McMurdo's request for waiver.

2. *Background*. AIS is a maritime navigation safety communications system that provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information, automatically to appropriately equipped shore stations, other ships, and aircraft.[3] In 2010, we granted McMurdo a waiver of Section 80.1106(c) to permit the certification and use of its Smartfind S5 AIS Search and Rescue Transponder (SART).[4] An AIS SART is used to locate a survival craft or distressed vessel by transmitting a unique identification code and Global Positioning System (GPS) coordinates to all AIS-enabled devices within VHF radio range.

3. We explained that the International Maritime Organization (IMO) had amended the Global Maritime Distress and Safety System (GMDSS) regulations to permit AIS SARTs as an alternative to GMDSS SARTs operating in the 9.2-9.5 GHz (9 GHz) band, but McMurdo required a waiver for the Smartfind S5 because the Commission's Rules authorized only 9 GHz GMDSS SARTs.[5] The Smartfind S5 meets the international requirements for an AIS SART[6] and has the same purpose as a 9 GHz GMDSS

[1] 47 C.F.R. § 80.1101(c)(6).

[2] *See* Letter to FCC, from Neil Jordan, Engineering Manager, McMurdo Limited, dated July 11, 2011 (Waiver Request).

[3] *See* Amendment of the Commission's Rules Regarding Maritime Automatic Identification Systems, *Memorandum Opinion and Order and Notice of Proposed Rule Making*, WT Docket No. 04-344, 19 FCC Rcd 20071, 20074 ¶ 5 (2004).

[4] *See* McMurdo, Ltd., *Order*, WT Docket No. 10-34, 25 FCC Rcd 9073 (WTB MD 2010) (*Order*) (citing IMO Resolution MSC.246(83), "Adoption of Performance Standards for Survival Craft AIS Search and Rescue Transmitters (AIS-SART) for Use in Search and Rescue Operations").

[5] *See Order*, 19 FCC Rcd. at 9073-74 ¶¶ 2-3.

[6] In addition to the IMO requirements, performance and technical specifications for the AIS SART were approved by the International Electrical Committee. *See* IEC 61097-14 Ed. 1, "Global maritime distress and safety system

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SART – to help locate vessels by transmitting a signal that is intended to assist in quickly locating a survival craft during search and rescue operations.[7] Because the Smartfind S5 is not a 9 GHz GMDSS SART, however, it does not meet all of the technical requirements in Section 80.1106(c)(6).[8] We concluded that a waiver was appropriate because approval of the Smartfind S5 would further the underlying purpose of the Commission's SART rules.

4. McMurdo now seeks a waiver to permit the certification and use of the Smartfind S10 and Safelink R10. It states that the proposed beacons are identical to the Smartfind S5 in all respects relevant to the generation and transmission of AIS-SART messages, but differ from an AIS SART in that they are designed to be worn on the person rather than mounted on a survival craft.[9] They are intended for use by persons at risk of falling into the water like mariners and workers on marine installations or docks, or divers returning to the surface out of sight of their dive boat. McMurdo states[10] that the proposed beacons meet the applicable parts of Radio Technical Commission for Maritime Services Recommended Standards for Maritime Survivor Locating Devices (MSLD)[11] and the international requirements for an AIS SART.[12] Consequently, as was the case with respect to the Smartfind S5, McMurdo requires a waiver of certain technical requirements in Section 80.1101(c)(6) that are particular to 9 GHz GMDSS SARTs before the Smartfind S10 and Safelink R10 may be certified for operation under Part 80 of the Commission's Rules.

5. *Discussion.* Section 1.925(b)(3) of the Commission's Rules provides that we may grant a waiver if it is shown that (a) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and grant of the requested waiver would be in the public interest; or (b) in light of unique or unusual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.[13] We find that a waiver is warranted under the circumstances presented.

6. Like a 9 GHz GMDSS SART, the proposed beacons' purpose is to transmit a signal that is

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(GMDSS) – Part 14: AIS search and rescue transmitter (AIS-SART) – Operational and performance requirements, methods of testing and required test results."

[7] *See Order*, 25 FCC Rcd at 9073-74 ¶ 3.

[8] *Id*. at 9073-74 ¶ 3. Specifically, the Smartfind S5 transmits on the international AIS channels (AIS 1 – 161.975 MHz and AIS 2 – 162.025 MHz) in the maritime VHF band using a modulation scheme of Self-Organizing Time Division Multiple Access employing Gaussian minimum shift keying, while a 9 GHz GMDSS SART transmits a pulsed transmission and the modulation is a series of twelve sweeps from 9.2 GHz to 9.5 GHz. Also, the Smartfind S5's power is one watt compared to four hundred milliwatts for the 9 GHz GMDSS SART. *Id.*

[9] *See* Waiver Request at Attachment: McMurdo Z500 Product Family – General Description at 3-7. The Smartfind S10 and Safelink R10 differ primarily in that the latter is intended to be affixed to a life jacket while the former can be clipped to a belt or carried in a pouch.

[10] *See* Waiver Request at Attachment: Knowledge Data Base Inquiry at 1.

[11] RTCM 11901.0, Version 1.0, RTCM Paper 240-2004/SC119-STD with Amendment 1. RTCM has updated this standard in document RTCM Paper 219-2011-SC119-155 CDV – RTCM 11901.1, RTCM Standard for Maritime Survivor Locating Devices.

[12] The proposed beacons do not meet certain functional requirements of IEC 61097-14, due to differences in their intended use compared to AIS SARTs. Specifically, the proposed beacons operate for twenty-four hours rather than ninety-six hours, lack a buoyant lanyard or a means of mounting, and meet the effective radiated power requirement when transmitting from the water surface rather than raised above it like a SART. These requirements with these differences have been incorporated into RTCM Paper 219-2011-SC119-155 CDV – RTCM 11901.1.

[13] 47 C.F.R. § 1.925(b)(3); *see also WAIT Radio v FCC*, 418 F. 2d 1153, 1159 (D.C. Cir. 1969).

intended to assist in quickly locating survivors during search and rescue operations. SARTs are stations in the maritime mobile service that are intended to assist nearby ships in locating and rescuing survival craft or vessels in distress. Each time a 9 GHz GMDSS SART detects a pulse from the radar of a searching vessel that is within approximately five nautical miles, the SART transmits a signal that is displayed on the screen of the radar that activated it. To ensure that such signals are received, the performance standards incorporated in the Commission's rules require that SARTs operate on a certain frequency using a certain modulation and output power. To accomplish an analogous purpose, the Smartfind S10 and Safelink R10, like the Smartfind S5, use AIS frequencies to transmit its precise GPS location to be displayed on an AIS-enabled electronic chart. We agree with McMurdo that its Smartfind S10 and Safelink R10 will enhance marine safety by quickly identifying a distress alert and providing the location of the person in the water so that immediate assistance can be rendered without having to prosecute a time-consuming and expensive search and rescue operation. Accordingly, we conclude that a waiver would further the underlying purpose of the Commission's SART rules and would be in the public interest.

7. We therefore grant McMurdo's waiver request to permit the certification and use of its Smartfind S10 and Safelink R10 AIS SART. Prior to submitting an equipment authorization application to the Commission, McMurdo must submit the following information, in duplicate, to the Commandant (GG-521), U.S. Coast Guard (Stop 7126), 2100 2nd Street, SW, Washington, DC 20593-7126: a) the manufacturer name and model number of the device; and b) copies of the test report and test data obtained from a test facility showing that the device complies with the environmental and operational requirements identified in RTCM Paper 219-2011-SC119-155 CDV – RTCM 11901.1. After reviewing the information, the Coast Guard will issue a letter stating whether the device satisfies all of the applicable requirements specified in RTCM 11901.1. This letter must be submitted to the Commission as part of McMurdo's equipment authorization application, along with a copy of the technical test data, and the instruction manual(s). This procedure applies to the initial application for certification, and any subsequent permissive change requests.

8. Accordingly, IT IS ORDERED, pursuant to Sections 4(i) and 303(i) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, that the Request for Waiver filed by McMurdo, Ltd. on July 11, 2009, IS GRANTED, and Section 80.1101 of the Commission's Rules, 47 C.F.R. § 80.1101, IS WAIVED to the extent necessary to permit equipment authorization for the McMurdo Smartfind S10 and Kannad Marine Safelink R10 Personal Automatic Identification System Beacons. A copy of this *Order* shall be submitted with any equipment authorization application.

9. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Scot Stone
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Wireless Telecommunications Bureau